

	1.	2.	3.	4.	5.	6.	7.	8.	9.
<i>Cerberus rhynchops</i>	*	*	*	*	*	*	*	*	*
<i>Naia tripudians</i>	*	*	*	*	*	*	..	*	
<i>Adeniophis bilineatus</i>	*				
<i>Amblycephalus boa</i>	*	..	*	*	*	*	..	*
<i>Trimeresurus formosus</i>	*	*	*				
— <i>subannulatus</i>	*	*	*	*	..	*	
<i>Oxyglossus lævis</i>	*	*	*	..	*	*			
<i>Rana macrodon</i>	*	*	*	*	*	*	*		
— <i>palavanensis</i>	*				
— <i>varians</i>	*				
— <i>glandulosa</i>	*	..	*	*				
<i>Staurois natator</i>	*	*			
<i>Rhacophorus leucomystax</i>	*	*	*	*	*	*	*	*	
— <i>macrotis</i>	*	*				
— <i>Everetti</i>	*				
<i>Ixalus longicrus</i>	*				
<i>Bufo philippinicus</i>	*				
<i>Leptobrachium Hasseltii</i> ..	*	*	*	*	*	..	*		
<i>Megalophrys montana</i>	*	*	*	*	*		

XV.—*Descriptions of Fifteen new Species of South-African Terrestrial Mollusca.* By JAMES COSMO MELVILL, M.A., F.L.S., and JOHN HENRY PONSONBY, F.Z.S.

[Plate I.]

Since our last communication * a fair amount of additional material has been kindly forwarded by various correspondents, and one or two more species from the rich stores of Mr. E. L. Layard.

1. *Nanina morrumbalensis*, sp. n. (Pl. I. fig. 1.)

N. testa olivaceo-cornea, pertenui, planulata, obtecte et angustissime umbilicata, parum nitente; anfractibus quinque, undique irregulariter longitudinaliter rugoso-striatis, ultimo rapide accrescente, spira conico-depressa; apertura ampla, ovato-lunari; peristomate pertenui, simplici, apud umbilicum paulum reflexo. Long. .75, lat. 1.30 unc.

Hab. Mount Morrumbala, Central East Africa (*E. L. Layard*).

A large, somewhat transparent, horny shell, but little shining, throughout longitudinally striately wrinkled, the

* *Ann. & Mag. Nat. Hist.* ser. 6, vol. xii. pp. 103 *et* *sqq.*

spire being conically depressed, mouth large, lip very thin and fragile.

Three specimens in Mr. Layard's collection.

2. *Natalina coerneyensis*, sp. n. (Pl. I. fig. 2.)

N. testa anguste umbilicata, conica, cornea, nitente; anfractibus quatuor (ultimo rapide accrescente), supra fortiter tenuistriatis, infra nitidis; apertura rotunda; peristomate tenui, simplici, apud umbilicem paullum reflexo.

Long. .75, lat. 1 uuc.

Hab. Coerney, near Port Elizabeth (*J. Crawford*).

A comparatively large and handsome species, near *N. knysnaensis* (Pfr.), but the upper whorls are strongly striate, while the umbilicus in the latter species is much more narrowed by the triangularly reflexed growth of the columella.

We have also seen a good series of this shell in Mr. Layard's collection, labelled "Natal."

3. *Natalina Chaplini*, sp. n. (Pl. I. fig. 3.)

N. testa depressiuscula, late et profunde umbilicata, ad apicem planata; anfractibus quatuor, supra oblique longitudinaliter dense striatis, ultimo infra nitido; apertura ovato-lunari; peristomate tenui, simplici.

Long. 6, lat. 10.50 mill.

Hab. Karnachs, near Port Elizabeth (*J. Crawford*).

A very pretty species, of the same section as *vernucosa* &c., and of a beautiful golden horny colour, striated above, shining beneath, widely umbilicated, and much depressed.

Three specimens, which, although perhaps not quite full-grown, seem to present distinct specific characteristics.

4. *Helix (Dorcasia) inhluzana*, sp. n. (Pl. I. fig. 4.)

H. testa profunde sed anguste umbilicata, oblique depressa, cornea, nitida; anfractibus quatuor, longitudinaliter striatulis, apud suturas compressis, ultimo subdepresso, antice deflexo; apertura oblique ovata; peristomate simplici, ad umbilicem paullum reflexo.

Long. 15, lat. 23 mill.

Hab. Inhluzan Mountain, Drakensberg Range (*Mrs. C. Shaw, per J. F. Quekett*).

Two specimens of a conspicuous shining horny shell, allied to *H. Kraussii* (Pfr.), from which species it differs in being more compressed laterally and not so much at the base round

the umbilicus, and also in being smooth, more shining, and of a warmer chestnut-olive.

5. *Buliminus nuptialis*, sp. n. (Pl. I. fig. 5.)

B. testa angustissime umbilicata, delicatula, tenui, succineo-brunnea; anfractibus quatuor, tribus supra parvis, ultimo perlato, rapide accrescente, effuso, undique longitudinaliter oblique rude liratis; apertura oblonga; peristomate simplici, tenui, apud umbilicum fere clausum, reflexo.

Long. 15, lat. 8·50 mill.

Hab. Craigie Burn, Somerset East (*Mrs. Mary Layard Barber*). In coll. E. L. Layard.

A small delicate shell, of succinoid character and nearly allied to *B. Bowkeri*, Sow., but differing in its fewer whorls, broader last whorl, coarser longitudinal liration, and in the absence of any granular sculpture.

6. *Achatina cinnamomea*, sp. n. (Pl. I. fig. 6.)

A. testa obesa, tumida, semipellucida, tenui, cinnamomeo-ochracea; anfractibus sex, ultimo rapide accrescente, tumidis, longitudinaliter irregulariter rugosis, flammis brunneis hic illic decoratis; apertura ovato-oblonga; peristomate tenui, labro intus lactescente.

Long. (sp. maj.) 2·25, lat. 1·70 unc.

Hab. Standerton (*Burnup*).

A handsome species, obese, of a cinnamon horn-colour, with darker brown longitudinal flames irregularly disposed.

Two fresh specimens and two dead; the latter are smaller, but undoubtedly the same species.

7. *Achatina ædigyra*, sp. n. (Pl. I. fig. 7.)

A. testa oblonga, compacta, nitida; anfractibus septem, tumidis, ventricosis, undique lævibus, planatis, specimine altero olivacea, fere unicolore, altero longitudinaliter flammis zebrinis decorato; apertura oblonga; peristomate pertenui, simplici.

Long. (sp. majoris unicoloris) 2·25, lat. 1·30 unc.

Hab. Craigie Burn, Somerset East (*Mrs. Mary Layard Barber, née Bowker*). In coll. E. L. Layard.

As Mr. Layard observes, this form would appear to be one of the links in the chain of *Achatinae* which inhabit the tropical and subtropical African regions. The present species is meanwhile well characterized by the remarkably ventricose growth of the whorls.

8. *Pupa psychion*, sp. n. (Pl. I. fig. 8.)

P. testa umbilicata, obesula, minuta, pallide brunnea, apice obtuso; anfractibus sex, tumidis, planulatis; apertura rotunda; peristomate incrassato, simplici.

Long. 2.50, lat. 1.50 mill.

Hab. Pretoria.

A minute species, like *haploa* (M. & P.), but the whorls are more tumid and only six in number. Mouth round, peristome simple, toothless, and without plaits.

9. *Pupa custodita*, sp. n. (Pl. I. fig. 9.)

P. testa umbilicata, obesa, dolioliformi, minuta, tenui, brunnea; anfractibus sex, ventricosis, arctissimo longitudinaliter tenuistriatis; apertura ovata; peristomate albo, reflexo, dentibus quinque internis munito, altero parietali, altero columellari, tribus labialibus.

Long. 3, lat. 1.50 mill.

Hab. Pretoria.

Much the same in ventricose tumidity of whorl and superficial appearance to the *P. psychion* just described, but entirely differing in the internal armature of the mouth, which, apparently simple externally, is really guarded within by no less than five teeth, three of these being labial, one sutural, and one columellar. It is a highly interesting species, and seems, though of the *fontana* group, to bear no very direct resemblance to hitherto described species.

10. *Pupa iota*, sp. n. (Pl. I. fig. 10.)

P. testa minutissima, superficialiter umbilicata, cylindrica, recta, tenui, apice obtuso; anfractibus septem, ventricosulis, tenuissime longitudinaliter striatis, striis obliquis; apertura ovata; peristomate pallido, reflexo, uniplicato, plica interna transversa fere aperturam ipsam attingente.

Long. (sp. maj.) 1.25, lat. .50 mill.

Hab. Pretoria.

Two specimens, one being more curt than that taken as the type, but the mouth-process, consisting of one median raised transverse internal plait not quite reaching the peristome, is the same in each.

11. *Pupa omicronaria*, sp. n. (Pl. I. fig. 11.)

P. testa minuta, cylindrica, recta, brunnea; anfractibus septem (in uno specimine octo), ventricosis, tenuissime longitudinaliter

striatis, striis obliquis; apertura ovato-rotunda; peristomate pallido, simplici.
 Long. (sp. maj.) 3, lat. 1.50 mill.

Hab. Pretoria.

This shell comes next to our *P. quantula*, and may perhaps eventually turn out to be a variety of that species. The mouth, however, is rounder and the form a little less cylindrical.

12. *Pupa keræa*, sp. n. (Pl. I. fig. 12.)

P. testa minutissima, brunnescente, cylindrica; anfractibus sex, rectis, longitudinaliter tenuistriatis; apertura ovata; peristomate pallido, reflexo, intus uno dente suturali instructo.
 Long. 2.15, lat. 1 mill.

Hab. Pretoria.

A small insignificant shell, with one internal sutural or parietal tooth.

Two specimens.

13. *Pupa charybdica*, sp. n. (Pl. I. fig. 13.)

P. testa compacta, crassiuscula, cylindriciformi, brunnea, apice obtuso; anfractibus septem, rectis, longitudinaliter obscure et oblique tenuistriatis; apertura rotunda; peristomate incrassato, pallido, reflexo, intus tribus dentibus mamillaribus munito, altero parietali, altero columellari, tertio basali.
 Long. 3, lat. 1.15 mill.

Hab. Coerney, near Port Elizabeth.

A cylindrical dark brown shell, not shining, stouter in substance than most of its congeners; whorls seven, straight, longitudinally, obscurely and obliquely finely striate; aperture round; peristome incrassate, reflexed, furnished with three internal teeth—basal, columellar, and sutural.

Three specimens.

14. *Pupa frustillum*, sp. n. (Pl. I. fig. 14.)

P. testa nitida, cylindrica, late brunnea; anfractibus septem, rectis, oblique tenuissime striatis; apertura ovata; peristomate pallide brunneo, intus tribus dentibus munito, dente altero parietali, altero basali, tertio columellari.
 Long. 3.50, lat. 1.25 mill.

Hab. Port Elizabeth.

Near *P. fontana*, Krauss, but more cylindrical than that species, and differing, besides, in the tooth-processes.

15. *Ennea nonotiensis*, sp. n. (Pl. I. fig. 15.)

E. testa rimata, dolioliformi, straminea, delicatula, apice obtusissimo; anfractibus quinque, undique tenuissime longitudinaliter striatis: apertura rotunda; peristomate paullum extus crenulato, albo, plicis vel dentibus quinque instructo, plica parietali magna intrante, dentibus duobus labialibus, uno basali, plica columellari valde intrante, magna.

Long. 5, lat. 2 mill.

Hab. Nonoti, coast of Natal (*Burnup*).

A delicate straw-coloured species, apparently distinct from any of its allies in the small group characterized by the presence of a double tooth on the outer lip.

EXPLANATION OF PLATE I.

Fig. 1. Nanina morrunbalensis.
Fig. 2. Natalina coerneyensis.
Fig. 3. ——— Chaplini.
Fig. 4. Dorcasia inhluzana.
Fig. 5. Buliminus nuptialis.
Fig. 6. Achatina cinnamomea.
Fig. 7. ——— œdigyra.
Fig. 8. Pupa psichion.

Fig. 9. Pupa custodita.
Fig. 10. ——— iota.
Fig. 11. ——— omicronaria.
Fig. 12. ——— kercæ.
Fig. 13. ——— charybdica.
Fig. 14. ——— frustillum.
Fig. 15. Ennea nonotiensis.

XVI.—*Descriptions of new Species of Rhopalocera from Mexico and Central America.* By F. D. GODMAN and O. SALVIN.

SPECIMENS of the following species of *Rhopalocera* have been recently received by us from various correspondents. As it will be some time before we can refer to them in our 'Biologia Centrali-Americana,' we describe them as follows:—

1. *Opsiphanes Staudingeri*, sp. n.

Rich reddish brown, apex of the primaries darker; a curved tawny band proceeds from the costa across the apex and thence to the anal angle; the edges of this band are irregular, and it is bordered by dark brown on both sides; two rather widely divided white spots in the apex: secondaries with a tawny margin, the inner edge of which is irregular and is bordered with dark brown. Beneath nearly the whole surface is dark brown, mottled with tawny; dark bands enclosing a yellowish space cross the cell of the primaries, and other dark irregular lines occur at the end of the cell; there are two